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March 31, 2022

VIA ELECTRONIC FILING

Ms. Jocelyn Boyd
Chief Clerk and Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

Re: Docket No. 2021-66-A

Dear Ms. Boyd:

On December 31, 2021, the South Carolina Office of Regulatory Staff (“ORS”) filed its Final Report on the Resiliency of South Carolina’s Electrical and Natural Gas Infrastructure Against Extreme Winter Storm Events (“Final Report”). On January 31, 2022, the ORS filed a letter requesting utility feedback on the recommendations contained in the Final Report.

Piedmont Natural Gas Company, Inc. hereby respectfully submits its feedback in response to the ORS’ enumerated recommendations in the Final Report.

Thank you for your assistance with this matter. If you have any questions regarding this filing, you may reach me at the number shown above.

Sincerely,

/s/ T. Richmond McPherson III
T. Richmond McPherson

TRM/rkg

Enclosure

cc: ORS
Bruce Barkley
Pia Powers
James Jeffries

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the attached is being served this date upon all of the parties to this docket electronically or by depositing a copy of the same in the United States Mail, First Class Postage Prepaid, at the addresses contained in the official service list in this proceeding.

This the 31st day of March, 2022.

/s/ Richard K. Goley
Richard K. Goley

Piedmont Natural Gas Company, Inc.
Docket No. 2021-66-A
Responses of Piedmont Natural Gas Company, Inc.
To ORS Recommendations

Part I: Response to Final Recommendations

1. Electric and natural gas Utility Providers should strengthen existing procedures for cold weather preparedness, planning, engineering, operations and coordination to prevent extended interruptions in natural gas and electric service corresponding to the detailed recommendations identified in Appendices F through I. Procedures should provide enhanced and enforced operations and maintenance to mitigate disruption. For entities that are under the purview of mandatory NERC Reliability Standards, see Recommendation No. 3 for the voluntary adoption of the Public Utility Commission of Texas rules.

Piedmont Response: Piedmont believes its existing processes and procedures included in its comments filed in this docket on June 11, 2021 indicate a high level of preparedness and reflect the Company's commitment to safe and reliable natural gas service regardless of weather conditions. The Company also notes its agreement with the concept of continuous improvement. Note that Piedmont addresses the detailed recommendations reflected in Appendix G (Large Natural Gas Utilities) in its responses to questions 1 through 21 of Part II of our responses.

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2. South Carolina should form a task force to evaluate the voluntary adoption of practices comparable to those recently adopted in Texas. Refer to the legislatively-mandated rules instituted around winter storm planning and requirements for Generation Entities and Transmission Providers

Piedmont Response: Piedmont supports the formation of such task force and is willing to participate. The Company's designated representative is Adam Long, VP Gas Pipeline Operations. His email address is Adam.Long2@duke-energy.com and phone number is 704.731.4130.

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3. Natural Gas Utility Providers should consider updates to Distribution Integrity Management Plans (DIMP), Transmission Integrity Management Plans (TIMP), operations and maintenance manuals and design standards to include specific adverse winter weather risk evaluation and mitigation actions.

Piedmont Response: Piedmont's policies and procedures include the consideration of weather conditions to ensure firm service to customers is maintained up to our maximum design requirements. These include considerations for the coldest temperatures and other adverse weather conditions. The proactive completion of necessary infrastructure projects, such as the planned Greenville County Reliability Project (formerly known as Line 201), helps to ensure natural gas service is available during high demand conditions.

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4. Electric and natural gas Utility Providers are encouraged to collaborate with each other to develop a set of standard emergency preparedness and operating practice guidelines to provide consistent levels of service reliability to all South Carolina electric and natural gas customers. Guidelines may initially be voluntary and evolve to mandatory, once matured.

Piedmont Response: Piedmont frequently and effectively communicates with its only electric generation customer, Duke Energy Carolinas and supports the recommendation to strengthen this collaboration. The task force may consider making this a priority for all relevant utilities.

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5. All electric and natural gas Utility Providers should be required to participate in adverse winter weather emergency drills and/or tabletop exercises with state and local emergency management agencies in their respective emergency management planning cycles. The State should consider including propane providers and petroleum pipeline providers in adverse winter weather emergency drills and/or tabletop exercises.

Piedmont Response: Piedmont routinely interfaces with local, state, and federal emergency response organizations in efforts to ensure all parties are familiar with the Company's Incident Command Structure Event Response Organization ("ICS") and how the Company and these organizations can provide mutual support during an event that requires activation of the ICS.

Piedmont participates in activities such as GridEX, which is a multi-organizational and multi-company exercise to evaluate emergency preparedness for large scale events such as that experienced by Texas and Oklahoma in 2021.

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6. Electric and natural gas Utility Providers should consider the feasibility of a study on the costs/benefits of resiliency and reliability enhancements and, as part of that study, consider whether there are any federal funding opportunities.

Piedmont Response: Piedmont's system is evaluated as customers and infrastructure are added or removed during normal daily operations. These evaluations include consideration of temperature and other adverse weather conditions. As the vast majority of our pipeline infrastructure is underground, our primary focus is to ensure the reliability of our system under the coldest temperatures. The proactive completion of additional infrastructure, such as the Greenville County Reliability Project (formerly known as Line 201), helps to ensure reliable service during those high demand conditions.

Following these protocols above, Piedmont has never experienced a loss of natural gas service due to cold weather. Therefore, while Piedmont endorses greater collaboration with Electric Providers, potentially through the task force, the Company does not believe it would benefit from a study as recommended. The Company is not aware of federal funding opportunities for a study of this nature and believes the cost would outweigh any potential benefits for Piedmont.

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7. Electric and natural gas Utility Providers should actively participate in regional and national industry groups such as: Electric Power Research Institute (EPRI), American Gas Association (AGA), Southeastern Electric Exchange (SEE), Municipal Association of South Carolina (MASC), and Carolinas Public Gas Association (Carolina SPGA).

Piedmont Response: Piedmont concurs with this recommendation and fully intends to continue to its longstanding interaction with regional and national industry groups.

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Part II: Response to Large Natural Gas Utility Provider (“LGU”)-Specific Recommendations

1. Assess feasibility of implementing more comprehensive severe weather damage predictive models to improve the emergency processes. This will help strengthen well-established ICS processes.

Piedmont Response: Piedmont’s system is evaluated as customers and Company infrastructure are added or removed during normal daily operations. These evaluations include considerations of temperature and other adverse weather conditions. As the vast majority of our pipeline infrastructure is underground, Piedmont’s primary focus is to ensure the reliability of our system.

The Company ensures continuing reliability through its analysis of results produced by the Synergi Gas Hydraulic Modeling Software. This software incorporates maps of the Company’s existing facilities along with expected natural gas consumption under cold weather conditions for firm service customers. Additional infrastructure is proposed if the analysis indicates a condition under which firm customers cannot be reliably served. This analysis process is continuously updated for changes such as customer additions.

Following this process, Piedmont has not experienced any outages due to cold weather.

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2. LGU Continue improving on the use of analytical tools and incorporate to risk management processes accordingly. The use of analytics needs to be investigated by the entities to develop use cases in incorporating and quantifying risks.

Piedmont Response: See response to immediately preceding recommendation. Piedmont believes its robust system modeling process and associated project construction will continue to ensure reliable natural gas service for its customers under the coldest temperatures.

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3. Continue to develop the collection and analysis of operational performance data to build better information around system vulnerabilities and improvement opportunities.

Piedmont Response: See response to Recommendation 1 in this Section II. Piedmont's robust system modeling process and associated project construction will continue to ensure reliable natural gas service for its customers under the coldest temperatures.

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4. Major LGU events requiring mutual assistance are generally far less frequent than Large investor-owned electric utility (LEU) storm events. Although the probability of a gas emergency event requiring mutual assistance is low, this capability should be periodically tested. Often, gas emergency drills or tabletop exercises tend to focus on local emergencies not requiring mutual assistance. It is recommended that the LGUs perform, on a periodic basis, an emergency drill requiring external support, including coordination with state and local emergency management agencies.

Piedmont Response: Piedmont routinely interfaces with local, state, and federal emergency response organizations in efforts to ensure all parties are familiar with the Company's Incident Command Structure Event Response Organization ("ICS") and how the Company and these organization can provide mutual support during an event that requires activation of the ICS.

Piedmont participates in activities such as GridEX, which is a multi-organizational and multi-company exercise to evaluate emergency preparedness for large scale events such as that experienced by Texas and Oklahoma in 2021.

Concerning mutual assurance, Piedmont supplied technicians to support another natural gas local distribution company after wild fires struck Boulder, Colorado in 2021. Piedmont participates in mutual aid coalitions through both the Southern Gas Association and the American Gas Association. These coalitions provided aid to natural gas local distribution companies after Hurricane Sandy in 2012 and Hurricanes Katrina and Rita in 2005. Piedmont is confident that mutual aid would be supplied by members of these organizations if needed.

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5. Prediction models are used in advance of extreme weather events to estimate system impacts and required resources; this capability needs to continue to be improved to properly plan where to optimally assign mutual assistance crews (including project resource needs).

Piedmont Response: See response to Recommendation 1 in this Section II. Piedmont believes its robust system modeling process and associated project construction will continue to ensure reliable natural gas service for its customers under the coldest temperatures.

Further, the Company employs a sophisticated model to predict the needs of its customers on a daily basis. This allows the Company to match its incoming supply of natural gas to customer requirements.

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6. The LGUs should evaluate black start capabilities for key purchase points and regulator stations for an extended loss of electric distribution service.

Piedmont Response: As provided on Page 24 of its comments filed June 11, 2021 in this docket, Piedmont is fully prepared to serve its customers in the event of a loss of electricity, telecommunications, or gasoline under its business continuity plans. Further, Piedmont's design and operational procedures require electronic devices critical to the provision of natural gas service to be equipped with a redundant electric source such as a generator or battery.

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7. The LGUs may also wish to consider designation of critical valves with periodic testing as a preparatory action for severe winter weather.

Piedmont Response: As part of Piedmont's current regulatory requirements, its pipeline system is routinely evaluated for sectionalization of the distribution system by valve operation. Any valve designated for that purpose, as well as regulator station valves, transmission valves, and any other unique valve that the company chooses to designate, are maintained on not less than an annual basis.

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8. As stated in the assessment, operating protocols (procedures) are not universal for the LGUs. This is area for improvement opportunities. Evaluation, documentation, and training of severe winter weather operating protocols should not be burdensome and can be accomplished in a cost-effective manner.

Piedmont Response: Piedmont agrees and believes our current policies and procedures are designed to continue to reliably serve customer requirements during cold temperature conditions.

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9. The entities should consider use of a Knowledge Management System (KMS) to aid in improving training processes. These are efficient methods that could help the entities record operational procedures and could be used for training personnel, including external mutual assistance crews to get the familiarity of the local entities' standards and assets.

Piedmont Response: Piedmont concurs and has implemented the American Petroleum Institute Recommended Practice 1173 ("API RP-1173") for Pipeline Safety Management System ("PSMS"). This system mirrors the requirements of the recommended KMS and is specific to the natural gas pipeline industry.

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10. If not already considered, the LGUs should develop emergency stock of equipment and parts for a severe winter weather event. This may already be covered in existing emergency stock.

Piedmont Response: Emergency stock of equipment and parts is included in Piedmont's existing operating plan.

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11. Establish a defined program for cold winter weather resilience and establish an annual budget. This could provide internal value for tracking planned and completed cold winter weather resilience actions as well as informational value to public stakeholders.

Piedmont Response: See response to Recommendation 1 in this Section II. Piedmont believes its robust system modeling process and associated project construction are a defined resilience program that will continue to ensure reliable natural gas service for its customers under the coldest temperatures. Further, Piedmont performs maintenance annually to ensure equipment is ready to function properly during cold weather.

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12. The LGUs should consider establishing a working group with state and local emergency management agencies to communicate severe winter weather mitigation plans and engage with local stakeholders on severe weather planning.

Piedmont Response: Piedmont routinely interfaces with local, state, and federal emergency response organizations in efforts to ensure all parties are familiar with the Company's Incident Command Structure Event Response Organization ("ICS") and how the Company and these organization can provide mutual support during an event that requires activation of the ICS.

Piedmont participates in activities such as GridEX, which is a multi-organizational and multi-company exercise to evaluate emergency preparedness for large scale events such as that experienced by Texas and Oklahoma in 2021.

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13. The LGU entities reported their respective processes in identifying key internal and external stakeholders related to major events. An improvement opportunity is to personalize a communication plan at each stage of the development of the resiliency plan so that the engagement is set earlier on and not only during the event itself.

Piedmont Response: Piedmont concurs with this recommendation and believes its existing Emergency Management Program referenced on Page 22 of its comments filed June 11, 2021 adequately incorporates this important planning consideration. Piedmont is a wholly owned subsidiary of Duke Energy. Duke Energy's Incident Command Structure contains a liaison from its Corporate Communications Department.

There are four phases to Duke Energy's communication plan associated with a major event. These phases were discussed in comments filed by DEC and DEP on December 2, 2021 in this docket. The first phase takes place before the event, the second phase during the event, the third and fourth phases after the event has concluded. Through this process, customers are informed on matters such as how to prepare, how the storm is impacting the Company's system, restoration status and lessons learned. If a major event ever impacts Piedmont's service, it will follow the same process.

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14. Customer sentiment not analyzed during major events; these could be useful information for continuous process improvement.

Piedmont Response: Piedmont concurs with this recommendation and will evaluate customer feedback if it should ever have such an event. As stated previously in these responses, the Company has never experienced an outage due to cold weather.

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15. Take advantage of the social media platform to fully incorporate with major event communication plans.

Piedmont Response: Piedmont concurs with this recommendation and fully intends to use social media to communicate with its customers in the event a major event. To date, Piedmont has not experienced such event.

As stated in response to Recommendation 13, the Corporate Communications team is fully embedded in Duke Energy's Incident Command Structure. They will communicate current events using all available means to inform the public and its customers. This includes social media. Further, Piedmont would follow the communication protocol outlined by DEP and DEC in comments filed December 2, 2021 in this docket. This protocol includes the use of social media.

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16. As applicable, stakeholders at a national level need to be part of the communication plan. Major events are usually widespread.

Piedmont Response: Duke Energy's emergency planning process under the Incident Command Structure includes its Corporate Communications team. Communications with key national trade associations and South Carolina's elected officials are included in plans to inform key stakeholders.

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17. The LGU entities demonstrated the use and enablement of foundational tools and processes for situational awareness. The LGU entities need to continue to enhance capabilities to extend these situational awareness tools to use information/data for analytics (e.g., extending their load forecast capabilities to aid real-time operations as an operational forecasting tool during major events).

Piedmont Response: The Company employs a sophisticated model to predict the needs of its customers on a daily basis under all weather conditions. This allows the Company to match its incoming supply of natural gas to these customer requirements under all conditions.

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18. LGUs should provide documentation on the process to develop the peak design day and the ability to meet this demand during a severe winter weather event.

Piedmont Response: Piedmont constantly updates and reviews its peak design day modeling. The results are provided to the Commission in each of the Company's annual gas cost prudence reviews, most recently in the testimony of Piedmont witness Jeff Patton in Docket No 2021-4-G filed June 2, 2021. The Company is willing to share this planning process with the ORS and its representatives.

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19. LGUs should consider enhanced tools for business process tracking related to compliance tracking (and evidence repository) to fully mature the compliance management processes.

Piedmont Response: Piedmont believes its customers are well served by the Company's participation in Duke Energy's existing, mature compliance management process.

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20. Create a task force to identify the impact of a potential interruption of natural gas supply to generators and loads during extreme cold weather events, and approaches to mitigate these impacts.

Piedmont Response: Piedmont supports the formation of a South Carolina task force and believes that task force can be used to further this type of dialogue with electric generators.

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21. Review recent winter weatherization standards adopted by the state of Texas for applicability to the South Carolina generation and power delivery system and incorporate those expected to enhance the reliability of the electric grid in South Carolina.

Piedmont Response: This recommendation, as literally written, appears to be directed to electricity providers.

While these specific standards are not applicable to Piedmont, the Company was very aware of the Texas event and participated in both a Piedmont-only focused review and a broader Duke Energy review of potential lessons to be learned from the 2021 Texas event.

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Part III: Response to Additional Recommendations Associated with Indicators for the Large Gas Utilities

1. Invite outside third parties to review and provide comments on the LGU entities' emergency plans

Piedmont Response: Piedmont participates in the American Gas Association Peer to Peer review program. A significant part of that program involves the review of policies and procedures, including emergency plans, for each company. Suggestions for improvement are provided to senior management at the conclusion of onsite reviews. Presentations at future conferences are made to highlight industry leading performance by participating companies that are determined during these peer reviews.

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2. An enterprise-wide integrated enterprise asset management system with asset performance management enables investment planning and decision making.

Piedmont Response: Piedmont, as a wholly owned subsidiary of Duke Energy, currently utilizes enterprise-wide asset management systems in order to promote efficiency and reduce costs for the benefit of customers.